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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,698	06/18/2001	Yukio Tozawa	P100158-00036	8591

23353 7590 11/20/2002

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EXAMINER
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MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 11/20/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/881,698

Applicant(s)

TOZAWA ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears n th cover sheet with the correspondenc address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_ .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_ .

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 ambiguously refers to "the groove width". In claim 1 line 5, it is suggested to change "the groove width" to --a groove width of the main groove--.

Claim 3 ambiguously refers to "the groove depth". In claim 3 line 2, it is suggested to change "the groove depth" to --a groove depth of the main groove--.

- 3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4) **Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Kukimoto et al (US 5445201).**

The admitted prior art discloses a pneumatic tire having a ribbed tread comprising circumferential main grooves whose width narrows during inflation wherein both groove walls of the main groove is inclined at 80 degrees with respect to the tread surface. A protrusion is not provided at the groove bottom. The admitted prior art appears to teach that uneven wear occurs with this tire.

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As to claim 1, it would have been obvious to one of ordinary skill in the art to provide the main grooves of the admitted prior art tire such that both walls of the main groove incline outwardly and a protrusion is provided at in the groove since Kukimoto et al, also directed to a pneumatic tire having a ribbed tread comprising circumferential main grooves, suggests providing the main groove such that both groove walls are outwardly inclined and a ribbed shaped protrusion (stepped zone) is located in the groove (e.g. figure 22b) *so that the tire has excellent uneven wear resistance.*

As to claims 2 and 3, the limitation of the height difference being 0-2 mm (claim 2) / protrusion height being at least 80% of groove depth (claim 3) would have been obvious in view of Kukimoto et al's teaching to locate the top of the protrusion (stepped zone) slightly below the tread surface so that the stepped zone, which may define a height difference of 2 mm, contacts the road so as to serve as an uneven wear sacrificed portion.

As to claim 6, the limitation of the main groove being straight would have been obvious in view of Kukimoto et al's teaching to use a straight groove as an alternative to a zigzag groove.

5) **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Kukimoto et al (US 5445201) as applied above and further in view of Japan '906 (JP 4-274906) and / or Constantakis et al (US 2708957).**

As to claim 4, it would have been obvious to divide the protrusion as claimed in view of (a) Kukimoto et al's teaching to divide (albeit in the circumferential direction) the

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rib shaped protrusion (stepped zone) in the groove using slits and (b) Japan '906's teaching to divide a protrusion in a groove with a narrow groove 12 to prevent wet traction lowering at the latter half of the wear of the tread and / or (b) Constantakis et al's teaching to orient slits for improving antiskid / traction in the circumferential direction so as to axially divide the rib.

**6) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 10 lines 14-18) in view of Kukimoto et al (US 5445201) as applied above and further in view of Overman (US 2254622).**

As to claim 5, it would have been obvious to use protrusion composition different from the tread composition for the rib shaped protrusion suggested by Kukimoto et al in view of Overman's suggestion to use different compositions for main ribs (black) and lower height ribs (white) to present a pleasing color effect.

#### Remarks

- 7) The remaining references are cited of interest.
- 8) No claim is allowed.
- 9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

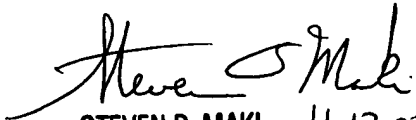
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
November 17, 2002

  
STEVEN D. MAKI 11-17-02  
PRIMARY EXAMINER  
GROUP 1300  
AU 1733